U.S. Ser. No. 09/429,331

Filed: October 28, 1999

Art Unit: 1639

Amendments to the Specification

In the specification, please amend the summary of the invention on page 20 at line 2, to include the following:

-- This invention also relates to a method of predicting the receptor-modulating activity of a test compound when bound to a receptor, comprising the steps of:

- (1) (a) providing a receptor;
- (b) contacting the receptor with a plurality of reference compounds, the reference compounds known to modulate the biological activity of the receptor, and wherein the binding of each reference compound to the receptor forms a reference conformation;
- (c) providing a panel comprising a plurality of members, wherein each member of the panel possesses differential ability to bind to the reference conformation;
- (d) contacting the reference conformation with the panel;
- (e) measuring the effect of the reference compound on the binding of the panel members to the receptor, the measuring step forming a fingerprint for each member of the plurality of reference compounds;
 - (2) (a) providing a test compound;

- (b) contacting the receptor with the test compound, wherein the binding of the test compound to the receptor forms a test conformation;
 - (c) contacting the test conformation with the panel;
- (d) measuring the effect of the test compound on the binding of the panel member; and
- (3) comparing the effect of the test compound on the binding of the panel member to the fingerprints to predict the receptor-modulating activity of the test substance when bound to the receptor.

Additionally, the invention relates to the method as outlined above, where the fingerprint for each member of the plurality of reference compounds comprises a plurality of panel-based descriptors, each panel-based descriptor characterizing the effect of the reference compound on the binding of a particular panel member to the receptor, the panel-based descriptors collectively characterizing the effect of the reference compound on the binding of all of the panel members, individually, to the receptor.—

In the Specification, at page 238, please replace the paragraph with the following:

Other ER binding peptides include

SSKYSYSRSSEGHSR (SEQ ID NO: 59) SSYQWETHSDKWRSR (SEQ ID NO: 60) SSVTKKALTIAKDSR (SEQ ID NO: 61)

The latter two are weak binders of ER in presence of estradiol.

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In the Specification, at page 239, please replace Table 3 with the following:

Table 3: Phage/Peptide_Classification

Class 1	# and isolation method
S S N H Q S S R L I E L L S R(SEQ ID NO: 62)	#4 ER + estradiol
S R L K E L L L P T D L S R(SEQ ID NO: 63)	#15 ER + estradiol
S S K L Y C L L D E S Y C S R(SEQ ID NO: 64)	#35 ER + estradiol
H G P L T L N L L R S S G G (SEQ ID NO: 65)	#41 ER + estradiol
S R L E Y W L K W E P G P S R(SEQ ID NO: 66)	#12 ER + estradiol
Class 2	
S S C K W Y E K C S G L W S R (SEQ ID NO: 67)	#7 ER
S S E Y C F Y W D S A H C S R (SEQ ID NO: 68)	#33 ER + estradiol
S S W V L L R D L P W G S R (SEQ ID NO: 69)	#31 ER
S S W V R L S D F P W G V S R (SEQ ID NO: 70)	#24 ER + estradiol
Class 3	
S S L T S R D F G S W Y A S R (SEQ ID NO: 71)	#5 ER + estradiol
Class 4	
S R T W E S P L G T W E W S R (SEQ ID NO: 72)	#13 ER
Class 5	
S A A C A T I S H Y L M G G (SEQ ID NO: 73)	#48 ER

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In the Specification, beginning at page 244, please replace Table 7 with the following:

Table 7: New Era Peptide Sequences Immobilized on Plastic

Peptide Name	Peptide Sequence	Isolated in the presence of receptor form	SERM present when peptide was identified
1PT	SRNLCFFWDDEYCSR (SEQ ID NO:	74) α	Tamoxifen &ICI 182,780
2PT	SWDMHQFFWEGVSR (SEQ ID NO: 7	75) α	Tamoxifen
3PT	SRWHGTLFWQDEQSR (SEQ ID NO:	76) α	Tamoxifen
4PT	SSCKWYEKCSGLWSR (SEQ ID NO:	77) α	Tamoxifen & ICI 182, 780
5PT	SSRMGHVWYDWTFSR (SEQ ID NO:	78) α	Tamoxifen
6PT	SSRLLGDFGGSVVSR (SEQ ID NO:	79) α	Tamoxifen
7 PT	SSKYVFGFQVAGGSR (SEQ ID NO:	80) α	Tamoxifen
8PT	SSWAGIKFGKPPHSR (SEQ ID NO:	81) α	Tamoxifen
9PT	SSSWSYGKPTFLSSR (SEQ ID NO:	82) α	Tamoxifen
10PT	SRDTGDMWWGRGGSR (SEQ ID NO:	83) α	Tamoxifen
11PT	SSGRYDPFVLNAASR (SEQ ID NO:	84) α	Tamoxifen
12PT	SSSPWWSFNLRDMSR (SEQ ID NO:	85) α	Tamoxifen
13PT	SSWPYLPKREEWASR (SEQ ID NO:	86) α	Tamoxifen
14PT	SSGWIEQKLRGSFSR (SEQ ID NO:	87) α	Tamoxifen
15PT	SSSATSIKVQYQISR (SEQ ID NO:	88) α	Tamoxifen
16PT	SSYLTLGKSMMAISR (SEQ ID NO:	89) α	Tamoxifen
17PT	SSWHSRWDLALGFSR (SEQ ID NO:	90) α	Tamoxifen
18PT	SSGYWGGWDYGAGSR (SEQ ID NO:	91) α	Tamoxifen
19PT	SRDNCGAGLWAGCSR (SEQ ID NO:	92) α	Tamoxifen
1PI	SSSTPGWWEWDWASR (SEQ ID NO:	93) α	ICI 182, 780
2PI	SSYWDGSWRRKETCVSCSR (SEQ ID	NO:94) α	ICI 182, 780
3PI	SSRTAEDYCFFADDYWCSR (SEQ ID	NO: 95) α	ICI 182, 780
4PI	SSRALALFPVGMESR (SEQ ID NO:	96) α	ICI 182, 780
5PI	SSDCESLTSYPHLKALCSR (SEQ ID	NO: 97) α	ICI 182, 780
6PI	SSTATALRDRLAYSR (SEQ ID NO:	98) α	ICI 182, 780
7PI	SSGKTREHYREGTSR (SEQ ID NO:	99) α	ICI 182, 780

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In the Specification, at pages 245 - 246, please replace Table 8 with the following:

Table 8: New Era-ERE Peptide Sequence Information

Peptide Name	Peptide Sequence	Isolated in the presence of receptor form	SERM present when peptide was identified
E1-1	HSHNHHSPWLFRLLGG (SEQ ID NO:		Estradiol
E1-3	HSHPHHSHLLYKLMGG (SEQ ID NO:		Estradiol
E1-4	HSHPLPPLLSRLLTGG (SEQ ID NO:	-	Estradiol
E1-7	SRLTCLLQSNGWDSEQCSR (SEQ ID	•	Estradiol
I4-10	SSLTSRDFGSWYASR (SEQ ID NO:		ICI
T3-1	SRTLQLDWGTLYSR (SEQ ID NO: 1		Tamoxifen
T1-10	SRLPPSVFSMCGSEVCLSR (SEQ ID		Tamoxifen
T2-10	SRFEIWKPEPGCVSSLENWEPGKRVCSR		•
	(SEQ ID NO: 107)	α	Tamoxifen
T3-11	SRVFGVSGGEVVLINGSSR (SEQ ID	NO: 108) α	Tamoxifen
1R	SRLCFGDWCMLGGVDVLSR (SEQ ID	NO: 109) α	Raloxifen
2R	SSLNMVVDTPWCGKWVCSR (SEQ ID	NO: 110) α	Raloxifen
3B	SSRPDAAFFGAKLSR (SEQ ID NO:	111) α	Buffer
4B	SSRPSPSFWEKQLSR (SEQ ID NO:	112) α	Buffer
5B	SSRPTAEWFRENLSR (SEQ ID NO:	113) α	Buffer
6B	•	114) α	Buffer
1B	SSRIADLFWRLEPSR (SEQ ID NO:	115) α	Buffer
7в	SRSYHGEWGVWTLSR (SEQ ID NO:	116) α	Buffer
10B	SSDWCFGWGGWCASEAVSR (SEQ ID		Buffer
9В	SRNWDWAALELLPYPHPSR (SEQ ID		Buffer
1E	• • •	119) α	Estradiol
2E	SRSPILTHLLSLGSR (SEQ ID NO:	120) α	Estradiol
3E	· · · · · · · · · · · · · · · · · · ·	121) α	Estradiol
9E	SSHGILWRLLSEGSR (SEQ ID NO:	122) α	Estradiol
11E	•	123) α	Estradiol
4E	SRLVALLKSPWSVSR (SEQ ID NO:	$124)$ α	Estradiol
5E	SRLEELLLMDFWRSR (SEQ ID NO:	$125)$ α	Estradiol
6E	SSKLWQLLSSPIDSR (SEQ ID NO:	126) α	Estradiol
14E	SSKLYCLLDESYCSR (SEQ ID NO:	64) α	Estradiol
7E	SRSLLMDMLMSDDYVTVSR (SEQ ID	· ·	Estradiol
8E	SSRLLACELMYEDADVCSR (SEQ ID	-	Estradiol
15E	HSHSPLLMALLAPPGG (SEQ ID NO:		Estradiol
10E		131) α	Estradiol
13E	,	132) α	Estradiol
16E	SSRTAEDYCFFADDYWCSR (SEQ ID	•	Estradiol
17E	SSLRCYLSSSKVDQWACSR (SEQ ID	•	Estradiol
18E	SSYKPHSLLEWHLLGGTSR (SEQ ID	NO: 135) α	Estradiol

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In the Specification at pages 247 - 250, please replace Table 9 with the following:

Table 9: New Erβ-ERE Peptide Sequence Information

Peptide Name	Peptide Sequence	Isolated the presence receptor		SERM present when peptide was identified
1B-β 2B-β 3B-β 4B-β 5B-β 6B-β 7B-β 8B-β 9B-β 12B-β 14B-β 16B-β 17B-β 18B-β 20B-β 21B-β 21B-β 21B-β 21B-β 21B-β 21B-β	SRLHCLLDSSYCSSR (SEQ ID NO: 13 SRLHCLLDSSYCSSR (SEQ ID NO: 13 SSWPNPTFWERQLSR (SEQ ID NO: 13 SYSKEWFEERLNSR (SEQ ID NO: 14 SSGMMREFFERELSR (SEQ ID NO: 14 SSGLPPNFERMLKSR (SEQ ID NO: 14 SSGPWLMHYLGGGSR (SEQ ID NO: 14 SSTSWLHHYLMGTSR (SEQ ID NO: 14 SSEACVGRWMLCEQLGVSR (SEQ ID NO: 14 SSEACVGRWMLCEQLGVSR (SEQ ID NO: 14 SSSLGPWRLSELESR (SEQ ID NO: 14 SSSLGPWRLSELESR (SEQ ID NO: 14 SSSGPWRWGLSIESR (SEQ ID NO: 14 SSIPPRSWWLSQLSR (SEQ ID NO: 14 SSIPPRSWWLSQLSR (SEQ ID NO: 15 SSWPGAEWFKEQLSR (SEQ ID NO: 15 SSKLYCLLDESYCSR (SEQ ID NO: 15 HSYSSHPLLLSYLWGG (SEQ ID NO: 15 HSYSSHPLLLSYLWGG (SEQ ID NO: 15 SSVFTIMDGKVALSR (SEQ ID NO: 15 SSVFTIMDGKVALSR (SEQ ID NO: 15 SRPYCLGDVWCLDSR (SEQ ID NO: 15	presence receptor form (6) (7) (8) (9) (1) (2) (3) (4) (2) (5) (6) (7) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	ន្ធិន្ធិន្ធិន្ធិទ្ធិទ្ធិទ្ធិទ្ធិទ្ធិទ្ធិទ្ធិទ្ធិទ្ធិទ	Buffer
4T-β 5T-β 6T-β 7T-β 8T-β 9T-β 10T-β 12T-β 13T-β 14T-β 15T-β	SREWEDGFGGRWLSR (SEQ ID NO: 15 SSWNSREFFLSQLSR (SEQ ID NO: 16 SSTTMFDFFYERLSR (SEQ ID NO: 16 SSARPWWLQFEGSSR (SEQ ID NO: 16 SSQEEWLLPWRLASR (SEQ ID NO: 16 SRLPPSVFSMCGSEVCLSR (SEQ ID NO: 16 SRLPPSVFSMCGSEVCLSR (SEQ ID NO: 16 SREGWMGPWRLADSR (SEQ ID NO: 16 SRNECIGPWCLTISR (SEQ ID NO: 16 SSPGSREWFKDMLSR (SEQ ID NO: 16 SSVASREWWVRELSR (SEQ ID NO: 16	9) (0) (1) (2) (1) (2) (1) (1) (1) (1) (2) (1) (1) (2) (3) (4) (5) (6) (7) (8)	ង្គង្គង្គង្គង្គ	Tamoxifen
16T-β 17T-β 18T-β 20T-β	SRMFQVCGDEVCLRSR (SEQ ID NO: 1 SSDLHRDCLGVWCLSR (SEQ ID NO: 1 SRLNGVFCHDSSDLWVCSR (SEQ ID NO SRPGCLRGVWCLADTPPSR (SEQ ID NO	70) : 171)	β β β	Tamoxifen Tamoxifen Tamoxifen Tamoxifen

21Τ-β	SSRLVPHSFWLDGLMHGSR (SEQ ID NO: 173)	β	Tamoxifen
211 β 22T-β	SSISTYHMGEWFYAMLSSR (SEQ ID NO: 174)	β	Tamoxifen
23T-β	SSDLYSQMREFFQINLSR (SEQ ID NO: 174)	β	Tamoxifen
1E-β	SSRGLLWDLLTKDSR (SEQ ID NO: 176)	β	Estradiol
2E-β	SRHGILWDLLQGDSR (SEQ ID NO: 177)	β	Estradiol
3E-β	SRLHDLLLRDESPSR (SEQ ID NO: 178)	β	Estradiol
4E-β	SRDWRSGFLYELLSR (SEQ ID NO: 179)	β	Estradiol
5E-β	SSDTRSRLYELLSSSYTSR (SEQ ID NO: 180)	β	Estradiol
6E-β	SRLEELLRVGVLTSR (SEQ ID NO: 181)	β	Estradiol
7E-β	SRLEDLLRGDSKPQSR (SEQ ID NO: 182)	β	Estradiol
7E-β 8E-β	SSPTGHRLLESLLLNSNSR (SEQ ID NO: 183)	β	Estradiol
9E-β	SSILERLLGGGSAETV (SEQ ID NO: 184)	β	Estradiol
9E-β 10E-β	SRSPILWHLLQDGSR (SEQ ID NO: 185)	β	Estradiol
10E-β 11E-β	SSRTPILFSLLETSR (SEQ ID NO: 186)	β	Estradiol
11E-β 12E-β	·		Estradiol
•	` ~	β	Estradiol
13Ε-β	SSGSSAGRLMMLLQDGVSR (SEQ ID NO: 188) SREGLLMRLLIGDSR (SEO ID NO: 189)	β	Estradiol
14Ε-β	· ~	β	
15E-β	SSHCHTRLCSLLTSR (SEQ ID NO: 190)	β	Estradiol
16E-β	SSRLLCLLDAGQCSR (SEQ ID NO: 191)	β	Estradiol
17E-β	SRNLLCLLDQEACSR (SEQ ID NO: 192)	β	Estradiol
18E-β	SSLKCLLNSNFCSR (SEQ ID NO: 193)	β	Estradiol
19Ε-β	SSLKCLLQSSPQKQPFCSR (SEQ ID NO: 194)	β	Estradiol
20E-β	SSRTLLEHYLLGGSR (SEQ ID NO: 195)	β	Estradiol
21E-β	SSAGLLEDMLRSRSR (SEQ ID NO: 196)	β	Estradiol
22E-β	SSRCSSLLCEMLIQTKESR (SEQ ID NO: 197)	β	Estradiol
23Ε-β	SSLQAGSWLMHYLRGGDSR (SEQ ID NO: 198)	β	Estradiol
24E-β	SRPEGSSWLLHYLSR (SEQ ID NO: 199)	β	Estradiol
25Ε-β	SSRTLLEHYLLGGSR (SEQ ID NO: 200)	β	Estradiol
26Ε-β	SRWWLDDHELLLYSSR (SEQ ID NO: 201)	β	Estradiol
27Ε-β	SSRTLYCHLTSSNPEWCSR (SEQ ID NO: 202)	β	Estradiol
28Ε-β	SSTRLMCWLGSADTSHCSR (SEQ ID NO: 203)	β	Estradiol
29Ε-β	SSYDWQCPSWYCPAPPSSR (SEQ ID NO: 204)	β	Estradiol
30E-β	SSTTWRCPEWYCGSR (SEQ ID NO: 205)	β	Estradiol
31E-β	SSWDFRVPWWYNNSR (SEQ ID NO: 206)	β	Estradiol
32E-β	SSQWQAPWWYIDASR (SEQ ID NO: 207)	β	Estradiol
33E-β	SSRPSFTIPWWFDDPSRSR (SEQ ID NO: 208)	β	Estradiol
34E-β	SSYEIPKWALQWLSR (SEQ ID NO: 209)	β	Estradiol
35E-β	SSLDLSQFPMTASFLRESR (SEQ ID NO: 210)	β	Estradiol

9.

In the Specification, at page 251, please replace Table 10 with the following:

Table 10: Panel Peptides for Example 2

- α/β I, SSNHQSSRLIELLSR (AB1)[17 β -estradiol] (SEQ ID NO: 211)
- α/β II, SAPRATISHYLMGG (AB2) [no modulator] (SEQ ID NO: 212)
- α/β III, SSWDMHQFFWEGVSR (AB3) [4-OH tamoxifen] (SEQ ID NO: 213)
- α/β IV, SRLPPSVFSMCGSEVCLSR (AB4) [same] (SEQ ID NO: 214)
- α/β V, SSPGSREWFKDMLSR (AB5) [same] (SEQ ID NO: 215)
- α I, SSEYCFYWDSAHCSR (A1) [17 β -estradiol] (SEQ ID NO: 216)
- α II, SSLTSRDFGSWYASR (A2) [17 β -estradiol] (SEQ ID NO: 217)
- α III, SRTWESPLGTWEWSR (A3) [no modulator] (SEQ ID NO: 218)
- β I, SREWEDGFGGRWLSR (B1) [4-OH tamoxifen] (SEQ ID NO: 219)
- β II, SSLDLSQFPMTASFLRESR (B2) [17β-estradiol] (SEQ ID NO: 220)
- β III, SSEACVGRWMLCEQLGVSR (B3) [no modulator] (SEQ ID NO: 221)

Alternative name parenthesized. Modulator used to isolate peptide in brackets.

In the Specification, at page 266, please replace Table 100 with the following:

Table 100

```
(SEQ ID NO: 222)
A
          SRAGLLSDLLEGKSR
          S S R S L L R D L L M V D S R
                                               (SEQ ID NO: 223)
          SSNKLLYNLLKMESR
                                                (SEQ ID NO: 224)
          S S K S L L L N L L S T P S R
                                                (SEQ ID NO: 225)
     H S F P R E S L L V R L L Q G G
                                                (SEQ ID NO: 226)
                S R L E M L L R S E T D F S R (SEQ ID NO: 227)
S R L E E L L K W G S V T S R (SEQ ID NO: 228)
               S R L E Q L L K E E F S Y S R (SEQ ID NO: 229)
S R L E Q L L R S E P D F S R (SEQ ID NO: 230)
S R L E D L L R A P F T T S R (SEQ ID NO: 231)
S R L E S L L R F G Q L D S R (SEQ ID NO: 232)
                  S S R L L S L L V G D F N S R (SEQ ID NO: 233)
                                             (SEQ ID NO: 234)
                SRLEELLLGTNRDSR
                                             (SEQ ID NO: 235)
(SEQ ID NO: 236)
                SRLEELLLMDFWRSR
                SRLKELLLPTDLSR
                                             (SEQ ID NO: 237)
                SRLECLLEGRLNCSR
                  S S K L Y C L L D E S Y C S R (SEQ ID NO: 238)
                S R L S C L L M G F E D C S R
                                              (SEQ ID NO: 239)
                  S S K L I R L L T S D E E L S R(SEQ ID NO: 240)
                  S S R L M E L L Q E G Q G W S R(SEQ ID NO: 241)
     SSNHQSSRLIELLSR
                                                (SEQ ID NO: 242)
                  S S R L W Q L L A S T D T S R (SEQ ID NO: 243)
                  S S K L W Q L L S S P I D S R (SEQ ID NO: 244)
                SRLVALLKSPWSVSR (SEQ ID NO: 245)
           SSNSMLWKLLAAPSR
                                                (SEQ ID NO: 246)
              S S K T L W R L L E G E R S R
S R A G P V L W G L L S E S R
                                               (SEQ ID NO: 247)
                                               (SEQ ID NO: 248)
          SRSPILTHLLSLGSR
                                                (SEQ ID NO: 249)
          SSTGILWKLLTAESR
                                               (SEQ ID NO: 250)
          SSHGILWRLLSEGSR
                                               (SEQ ID NO: 251)
В
                 KLVQLLTTTAE
                                               (SEQ ID NO: 252)
                 ILHRLLOEGSP
                                                (SEQ ID NO: 253)
                 LLRYLLDKDEK
     SRC1a
                                               (SEQ ID NO: 254)
                 LLQQLLTE
                                                (SEQ ID NO: 255)
     CBP
                 QLSELLRGGSG
                                               (SEQ ID NO: 256)
                                               (SEQ ID NO: 257)
                 QLVLLLHAHKC
                 YLEGLLMHOAA
                                               (SEQ ID NO: 258)
                 LLASLLQSESS
                                                (SEQ ID NO: 259)
                 \verb|HLKTLLKKSKV|
                                               (SEQ ID NO: 260)
     RIP140
                 QLALLSSEAH
                                               (SEQ ID NO: 261)
```

L	L	L	Н	L	L	K	S	Q	Т	I	(SEQ	ΙD	NO:	262)
L	L	Q	L	L	L	G	Н	K	N	Ε	(SEQ	ΙD	NO:	263)
V	L	Q	L	L	L	G	N	Ρ	K	G	(SEQ	ΙD	NO:	264)
L	\mathbf{L}	S	R	L	L	R	Q	N	Q	D	(SEQ	ΙD	NO:	265)
V	L	K	Q	L	L	L	S	E	N	С	(SEQ	ΙD	NO:	266)

SRC1a = human steroid receptor coactivator 1a,
CBP = mouse cAMP-responsive element (CREB) - binding 50 protein,
RIP 140 = human RIP140

In the Specification, at page 267, please replace Table 101 with the following:

Table 101

	Class ER4 D2 D30 D11	I SSNHQSRLIELLSR GSEPKSRLLELLSAPVTDV HPTHSSRLWELLMEATPTM VESGSSRLMQLLMANDLLT	(SEQ (SEQ (SEQ	ID ID	NO:	280) 281)
	Class D47 C33 D14	II HVYQHPLLLSLLSSEHESG HVEMHPLLMGLLMESQWGA QEAHGPLLWNLLSRSDTDW	(SEQ (SEQ (SEQ	ID	NO:	269)
	Class F6 D22 D48 D43 D17 D41 D26 D40 D15 F4	GHEPLTLLERLLMDDKQAV LPYEGSLLLKLLRAPVEEV SGWENSILYSLLSDRVSLD AHGESSLLAWLLSGEYSSA GVFCDSILCQLLAHDNARL HHNGHSILYGLLAGSDAPS LGERASLLDMLLRQENPAW SGWNESTLYRLLQADAFDV PSGGSSVLEYLLTHDTSIL PVGEPGLLWRLLSAPVERE	(SEQ (SEQ (SEQ (SEQ (SEQ (SEQ (SEQ (SEQ	ID ID ID ID ID ID ID ID	NO: NO: NO: NO: NO: NO: NO: NO:	273) 274) 275) 276) 277) 278)
	Misc. D10	WEEHSQMLLHLLDTGEAVW6	(SEQ	ID	NO:	283)
ERβsp.	#293	SSIKDFPNLISLLSR	(SEQ	ID	NO:	187)
GRIP-1	NR1 NR2 NR3	DSKGQTKLLQLLTTKSDQM LKEKHKILHQLLQDSSSPV KKKENALLRYLLDKDDTKD	(SEQ (SEQ (SEQ	ID	NO:	16) 17) 18)
SRC-1	NR1 NR2 NR3	YSQTSHKLVKLLTTTAEQQ LTARHKILHRLLQEGSPSD ESKDHQLLRYLLDKDEKDL	(SEQ (SEQ (SEQ	ID	NO:	19) 20) 21)

In the Specification, at page 268, please replace Table 202A with the following:

Table 202A: Giα1 GDP/GTPγS-Independent Phage (I-Peptides)

ID	Sequence/Motif Aligned					$\underline{\mathtt{Liq}}$	Library
99	SRAHLLTWSEFLDSHTK	(SEQ	ID	NO:	22)	BUF	E
103	SSGELITWYEFLGDLNP	(SEQ	ΙD	NO:	23)	BUF	_
107	SRGELTTWYEFLSHGRP	(SEQ	ΙD	NO:	24)	BUF	E
361	DELTWWEFISD	(SEQ	ΙD	NO:	25)	GTP	<u>E</u> <u>K</u>
388,391	VTWYDFLMEDTK	(SEQ	ΙD	NO:	26)	GTP	CMT
45	GLMTWREFLQE	(SEQ	ΙD	NO:	27)	BUF	$\frac{\overline{R}}{Y}$
397,401,412	NLMTWYEYLADGERL	(SEQ	ΙD	NO:	28)	GTP	<u>Y</u>
15r2,301,394	ADRLWTWQEFLY	(SEQ	ΙD	NO:	29)	BUF	PHD12
380,381,140	KTYSLYEFLEL	(SEQ	ΙD	NO:	30)	GTP	<u>N</u>
16	SSQLLTLHEFLNS	(SEQ	ΙD	NO:	31)	BUF	<u>H</u>
360	SSRGEYWWEFLGYSR	(SEQ	ΙD	NO:	32)		
101	SSADGIFWWEYAREAGE	(SEQ	ΙD	NO:	33)	BUF	
275 102 105 04	7. OD CEEDWOOD	(270	* -		241	6 m n	
	7LGRGTTDMPPWAWWS	(SEQ	ΙD		34)	GTP	
331,334	NYTERPWVWYH	(SEQ	ΙD		35)	GDP	
37	SSLYSMEPWKWYT	(SEQ	ΙD	NO:	36)	BUF	
387	KWWESDWFVNFG	(SEQ	ΙD	NO:	37)	GTP	
386	EEGMDWFMRVVE	(SEQ	ΙD	NO:	38)	GTP	

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In the Specification, at page 270, please replace Table 202B with the following:

Table 202B: Gi α 1 GTP-Specific Phage (T-Peptides)

370,377,378 244 366,G12 G33,G34	SVLSSSEMCFGWACY SEMCFGWACY FNEVCLGWQCY SSNARPCQGWHCYLPSQSR	(SEQ (SEQ	ID NO ID NO ID NO	: 40) : 41)	GTP GDP GTP	PARO K
353 408 G22,G25 G11,G26-29 G9,G10	WDGGVWMGPAS MGDSVLPYGGVWLGP SRYGGVWLGPEGNSR SSWDGGVWWGQYGSR SSNLDGCFTSGGVWSGCSR	(SEQ (SEQ (SEQ	ID NO ID NO ID NO ID NO	: 44) : 45) : 46)	GTP GTP	$\frac{K}{Y}$
382	LGYDINGVWIG	(SEQ	ID NO	: 48)	GTP	<u>N</u>
384 413	ICDIIPWEESCSR ACGPAICPWDFMPQL		ID NO	•	GTP GTP	PARO

Note: clone 244, which was identified in a screen for peptide which bound GDP:G-alpha, is suspected to having increased the affinity of the G-alpha for GTP through a conformational change.

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In the Specification, at page 272, please replace Table 202C with the following:

Table 202C: Gi α 1 GDP-Specific Phage (D-Peptides)

G4	SRGPQLTWQEFLTGAASSR	(SEQ					
314	NVVTWWEFLGP	(SEQ			•	GDP	
73	SREFVTWKEFLGS	(SEQ			-	BUF	K
343	SQLTWREFLFG	(SEQ		NO:	54)	GDP	R
217	SSHLMTWHEFISD	(SEQ		NO:	55)	GDP	Н
93	SRDGFETWAEFLGASGS	(SEQ	ΙD	NO:	56)	BUF	
62	SRLTWSEYLSEIDP	(SEQ	ΙD	NO:	57)	BUF	CMT
193	SRTVTWVDFLKET	(SEQ	ΙD	NO:	58)	GDP	D
324	MSWYEFMTEESM	(SEQ	ΙD	NO:	285)	GDP	CWI
400	AKHDLSWYEFLQLPI	(SEQ	ΙD	NO:	286)	GTP	V
281	SRLSWWEFLGASDCGTC	(SEQ	ID	NO:	287)	GDP	X14C <w></w>
359,161	DLLSLKEFLAT	(SEQ	ΙD	NO:	288)	GTP	K
176	SSPNLLTLEEFLS	(SEQ	ID	NO:	289)	GDP	. L
380,381,140	KTYSLYEFLEL	(SEQ	ΙD	NO:	290)	GTP	N
409,24r2	MSNRYTIYEFLNLHS	(SEQ	ID	NO:	291)	GTP	Y
320	LHWWEVLAEK	(SEQ	ID	NO:	292)	GDP	CWL
230	SSPQPLLHWWEMMTEPP	(SEQ	ΙD	NO:	293)	GDP	KNK
213	SRAGESVHWWEVL	(SEQ	ΙD	NO:	294)	GDP	Н
266	RAGPSEHWWEYIATL	(SEQ	ID	NO:	295)	GDP	N
237	EMISWHQYLLSIENN	(SEQ	ID	NO:	296)	GDP	PARO
126,128,133,242	2,248SSLRWDEFLMELGGGVA	(SEQ	ID	NO:	297)	BUF	М
379	VPWWVWLAEGD	(SEQ	ΙD	NO:	298)	GTP	N
196	SREIYWWDWLTDT	(SEQ	ID	NO:	299)	GDP	D
117	FGSNMLDLPTFLDWL	(SEQ	ID	NO:	300)	BUF	PARO
92	SRITFWELMLEGG	(SEQ			301)	BUF	L
179	SRTPYEWLGYWGA				302)	GDP	L
		, ~			,		
289	YDMCTWLEFLDGGEC	(SEQ	ID	NO:	303)	GDP	
	X14CW	` ~			•		
265	SPLCTWAEYLMEPSC	(SEQ	ID	NO:	304)	GDP	N
273	TQWCTWAEFLSSTDC	(SEQ	ID	NO:	305)	GDP	М
272,282,6R2	SSDGCTWQEFLAGHGPC	(SEQ		NO:	306)	GDP	N
	_	, -			•		
337,339	PFNNPPWMWWS	(SEQ	ΙD	NO:	307)	GDP	Р
268	SSPTVHENLPPWLWWSP	(SEQ	ΙD	NO:	308)	GDP	N
330	LIHVPPWAWYD	(SEQ	ΙD	NO:	309)	GDP	P
329	GFDVPPWYWDF				310)	GDP	Р
280	YSQVFGDAPVWAWYSSR	,			311)	GDP	
	X14CW	` ~			•		
319	WTPSDWQWWRSK	(SEO	ID	NO:	312)	GDP	CWL
115	SSHWSSDSIFPGFWYSG				313)	BUF	PARO
		, z			/	- 	23.2.10
197	SRGGVDLDIGNSA	(SEO	ΙD	NO:	314)	GDP	D
347	EGEDVRTRIAN				315)	GDP	R